Linacre and Locke: Pillars of Medical Humanism

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■ *The following address was given by Dr. Cecil J. Watson at the Wm. J. Kerr Gold Headed Cane Lecture, University of California School of Medicine, on 9 June 1967. At this event on the eve of Commencement Day, the senior student who has been chosen by his classmates and by his professors in the Department of Medicine as the one who best exemplifies the qualities of a true physician is awarded a gold-headed cane.* This carries on the British tradition of a similar cane that was passed from physician to physician from 1689 to 1825. The original cane, which was carried successively by Doctors John Radcliffe, Richard Mead, Anthony Askew, David Pitcairn and Matthew Baillie, now rests in the Hall of the Royal College of Physicians in London.*

THE LIST of 20th century physicians who have previously participated in this Gold Headed Cane Lectureship at the University of California School of Medicine, San Francisco, is in many ways as illustrious as that of the six men who carried the cane in the 18th century. Distance in time also lends enchantment and perhaps this will be much more tangible in another two centuries. In any event you can understand the feeling of honor and privilege which I have in now joining the fine company of Gold Headed Cane Lecturers. For a number of years, as you know, this lectureship has honored Wm. J. Kerr, a distinguished physician and professor of medicine of happy memory in this school, a man whose friendship I long enjoyed, and whose labor of love it was to found and for many years foster the tradition which is continued this evening.

The physicians who carried the Gold Headed Cane were by and large 18th century men. It is true that Radcliffe, whose cane it was in the first place, commenced his practice in the late 17th century, and Matthew Baillie, the last to carry it, finished his in the early 19th. Nevertheless, as the characteristics and achievements of individual centuries may be compared, theirs belong with the 18th. In general, the advancement of learning, to use the title of Francis Bacon's great work, was much more significant in the 16th, and especially the 17th, than in the 18th century. Little doubt that the science and culture of the gold headed canesmen were influenced in strong degree by the thinking of these giants of the earlier period who frequently exemplified the concept of the physician as a man of scholarly attainment as well as professional skills. I am particularly interested in the

*The award this year was made to two students, Robert I. Handin and Lorne G. Eltherington. Lawrence N. Hill was given honorable mention.

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natural philosophers of the 16th and 17th centuries and propose to tell you briefly something of the life and works of two of them whose thought has undoubtedly influenced physicians and scientists as well as philosophers of later times.

The Renaissance, it is generally agreed, had its focal point and much of its impetus in Florence, in the court of Lorenzo the Magnificent. It seems quite clear that Thomas Linacre of Canterbury was first and foremost in bringing the Renaissance to England. One can scarcely conceive of a finer example of how the forces of destiny at times serve a man and his country to their mutual advantage, nor of how a single man in 64 years can achieve in his own person such a remarkable synthesis of scholar and physician. With Thomas Browne and William Osler, of later ages, Linacre is at the summit of medical humanism. I have long cherished and often enjoyed a copy of Sir William Osler's Linacre Lecture of 1908, given at St. John's College, Cambridge. Nearly four centuries had then passed since the endowment by Linacre of lectureships in physic at Oxford and Cambridge. Linacre studied at Oxford but had no known attachment to Cambridge. Osler regards his bequest "as simply the act of a wise old man to encourage the study and teaching of medicine." The deed is a curious document, leaving a property known as the "Belle and Lanthorne" and 209 pounds in gold from which the College thenceforth was to pay 12 pounds a year for "a certayne lecture of physicke to be founded and established in the Universite of Cambridge." Every fourth year the lecturer was to cease his "Redying" for the space of half a year and he was to get only 6 pounds. Nothing is said as to the subject of the lecture but in the Statutes of Elizabeth, 1580, more precise directions are given. The lecturer was to be at the least, a Master of Arts, well versed in the works of Aristotle and somewhat also in those books of Galen which Linacre had translated into Latin. The office was continued in the Statues of Queen Victoria, 1849, with even more explicit directions — "the lecturer to deliver *courses* on Foods and Drugs, on the Care of Health, on Methods of Healing, on Forensic Medicine." All this for 12 pounds a year.

The Court of Lorenzo de Medici

I hope you will agree with Samuel Johnson that biography is the cream of literature. In the sense that the biography of great men and contemporary history are inseparable, I accept Johnson's view with pleasure. When Linacre was born, in 1460, the sanguinary Wars of the Roses in England were well under way, yet there is no evidence that their turbulence and bloodshed affected his early life and education. Selective service had not yet been devised but in any event, the semi-monastic life of the Universities appears to have offered sanctuary. In 1488, early in the reign of Henry VII, the wars over and England now relatively stable, young Linacre had completed his cloistered education at Oxford and the great world was about to unfold. He accompanied his old teacher, William deSelling, on an Embassy to Rome from Henry VII to the Pope. It is believed, however, that Linacre stopped in Bologna where he became the student of Poliziano, one of the great poets and scholars of the Renaissance, with whom he soon went to Florence to continue under his tutelage at the court of Lorenzo de Medici. Poliziano was one of Lorenzo's dearest friends; thus the young Englishman enjoyed the superb generosity for which Lorenzo was famous, and it may be noted that this reputation appears to have depended more on intellectual stimulus than physical comfort. Linacre was accorded the same privilege of instruction by Poliziano that was given to the sons of Lorenzo.

We may assume that it was not only the teaching of Poliziano that must have given joy and satisfaction to Linacre during this Florentine period. It is safe to say that Lorenzo was called the Magnificent because of his burning desire to learn and promote learning, his magnanimous spirit of inquiry, his love and fostering of art, literature and philosophy. Perhaps never since the golden age of Pericles, nor again until the "spacious days" of Queen Elizabeth I, was such a gathering of "master spirits" thus compressed in time and area. One contemplates the young Englishman's experience with a wistful feeling that a transmigration of souls might at times have its advantages. What a unique privilege it was for Linacre to sit at Lorenzo's board with even younger Michelangelo, drinking in the sparkling talk of the philosophers, Ficino and Pico della Mirandola; to know or even to see the great Florentine artists of the Renaissance, such as Botticelli, Perugino or Michelangelo's teacher, Ghirlandaio, and to see the marvels wrought by their predecessors, such as Ghiberti's golden doors of Paradise, or the cathedral dome of Brunelleschi. Linacre may have had occasional contact with that supreme genius, Leonardo da Vinci, although when Linacre was in Florence, Leonardo had already

transferred his activities to the court of the Duke of Milan. If any of you should wish to enjoy some delightful and highly informative reading about this time of great accomplishment, I recommend warmly the biography of the Medici, by G. F. Young.

The Influence of Scholars

Despite such surroundings and influences, or perhaps because of them, Linacre's profound humanism must have guided him more and more toward medicine during this period. He left Florence to spend a year in Rome, where he came under the influence of Hermolaus Barbarus, one of the outstanding scholars of his time. Osler believes that although Barbarus was not a physician, his intense interest in the works of Dioscorides, the first century pharmacologist, may have brushed off on Linacre and stimulated him to study medicine. At the same time, one may suspect that he was impelled by an urge to have a direct hand in a more practical humanism, the alleviation of suffering. Perhaps there was even a certain revulsion toward his Florentine period, and the intensive study of Greek in Lorenzo's Platonic Academy. He may well have felt that the Renaissance had too little immediate concern with the human problems which confront physicians. It is not certain when Linacre went to Padua to study medicine, but it is reasonably clear that he first spent a period of time in Venice working with Aldus, the great scholar and printer who credits Linacre with assistance in preparation of his superb edition of Aristotle. These volumes were issued in 1495-97. Thus Osler suggests that Linacre was in Venice at this time.

A friend and former student of mine, Dr. Ciro Dalla Rosa, at present a member of the medical faculty of Padua, has kindly ascertained from the records of the University that Linacre was examined and awarded the M.D. degree in 1496. He points out, however, that at that time it was unnecessary for a student to spend a long period in residence in order to qualify, and that many students came to Padua to be examined and receive its degree, after having had most of their education elsewhere. It is even possible that Linacre was then living in Venice and only went to Padua briefly to be examined and to receive the doctor's degree. This would mean that he must have picked up his medical education in Florence, Rome and Venice. In those days of strictly didactic lectures, this would not have been too difficult.

There is evidence that Linacre had returned to England well before 1500, as in that year he was made tutor to Prince Arthur, son of Henry VII, and it is clear that he had already spent some time at Oxford teaching grammar and practicing medicine. During this early period after his return from Italy, Linacre became teacher and lifelong friend of two men who were destined to be perhaps the greatest humanists of the 16th century, Desiderius Erasmus of Rotterdam and his friend, Sir Thomas More, whose *Utopia* brought him enduring fame. More, as you will remember, was the great chancellor who resisted Henry VIII and yielded his life for his principles. Erasmus' fame depends in part on his *Praise of Folly,* and if you have never read this delightful satire, it is something you will enjoy. Without naming Linacre, Erasmus is undoubtedly referring to him in this little book when he speaks of "an old Sophister that was a Grecian, a Latinist, a mathematician, a philosopher, a physician, and all to the greatest perfection." Linacre was also a priest, though not ordained until age 60.

The Royal College of Physicians

Earlier in his career, as physician to Henry VIII, his crowning glory was the founding of the Royal College of Physicians of London. Partly because of his great influence with the King, and with the help of Cardinal Wolsey, he obtained letters patent from Henry, dated 1518, constituting a corporate body of "regular-bred" physicians. This is the designation given later by MacMichael in his *"Lives of British Physicians,"* an excellent book upon which his later writing of the Gold Headed Cane was based. The sole authority of admitting persons to practice within the city of London and a circuit of seven miles around it, was granted to this corporation. The basis of the charter was stated as follows: "Before this period a great multitude of ignorant persons, of whom the greater part had no insight into physic nor in any other kind of learning; some could not even read the letter on the book, so far forth that common artificers, as smiths, weavers, and women, boldly and accustomably took upon them great cures, to the high displeasure of God, great infamy of the faculty, and the grievous hurt, damage and destruction of many of the king's liege people." With these words, possibly Linacre's, the Royal College of Physicians was inaugurated, that institution with which the tradition of the Gold Headed Cane is so thoroughly entwined.

In the University of Padua, on a large wall of the famed and very beautiful Palazzo del Bo, are many full length, colorful portraits of great men who gained the M.D. degree in that school. Thomas Linacre makes a very impressive figure in a superb gown of what appears to be ermine and mink, and wearing a mitred hat. Next to him are Francis Walsingham, destined to be one of Queen Elizabeth's great ministers, and William Harvey who, as you know, was supreme among the early English medical scientists. Many other famous men of Renaissance medicine are also there. All of these and the marvelous portrait of Morgagni, which hangs in the elegant Salo of the Faculty of Medicine, cannot fail to impart a thrilling sense of the great history of Padua, especially in medicine, medical science and medical humanism. I hope that one day each of you will have the opportunity to share this sensation.

Seventeenth Century England

But I must now move into the 17th century, in many ways the greatest in the progress of English thought, and the advancement of learning, which occurred despite long continued civil turmoil, regicide, suppression of liberty and, finally, a revolution upon the success of which the stability of the next two centuries depended. The earlier years of the 17th were thrilling enough when one contemplates the enormous stimulus which Francis Bacon gave to science, Shakespeare and Milton to literature. In passing, one might include Shakespeare as a medical humanist, and on this point I refer you to a delightful book by a London surgeon, Mr. R. R. Simpson, entitled "Shakespeare in Medicine." But despite fearful troubles, the later years of the century can scarcely be said to have lagged behind, considering the enormous contributions of Isaac Newton, Thomas Sydenham, Robert Boyle, John Locke and many others who would grace any century. The organization of the Royal Society of London, chartered by Charles II, was actually an expression of the remarkable interest in the advancement of learning which was rampant in the days of the Restoration.

To any of you who might be interested in reading about this stirring period, I strongly recommend the fine book of Bronowski and Mazlish, published in 1960, entitled "The Western Intellectual Tradition," which spans the development of thought from Leonardo to Hegel and relates in delightful fashion the early history of the Royal Society and the remarkable group which created it. Here you will find emphasized that there was no restriction of membership to scientists alone, and for many years, philosophers and poets, men such as John Dryden, were elected, as well as natural philosophers who combined scientific activity with exploration of human understanding. The poets were specifically charged with the duty of improving and invigorating the language of the Society. The two cultures, scientific and humanistic, had not yet become so unfortunately distinct as now. A preeminent example of this, at least among the charter members of the Royal Society, was John Locke about whom I wish now to comment briefly, as he would generally be placed at or near the pinnacle of medical humanism in the 17th century, and is undoubtedly one of the greatest representatives of all time.

John Locke's Philosophy

John Locke's philosophy, not his medicine, is the basis of his enduring fame. In America we recognize a debt to his *Essay on Human Understanding,* from which Thomas Jefferson, Benjamin Franklin, and perhaps others who helped write our Constitution, gained so much strength of ideology and beauty of expression. It is generally agreed that such phrases as "We hold these truths to be self evident . . ." were freely borrowed from Locke's great essays. Very little of his medicine has survived or deserved to survive as a contribution to the science or art, yet there is ample evidence that for many years he was a diligent, conscientious, imaginative physician, careful and compassionate in his ministrations. Here I refer you to a relatively new and delightful book entitled "John Locke, Philosopher and Physician," by Kenneth Dewhurst, a medical fellow of Corpus Christi College, Oxford. This book has much of interest for the physician and medical historian. There is no comparable record of the thoughts and observations of a physician whose friends included Robert Boyle, Thomas Sydenham, Thomas Willis and Isaac Newton.

In many ways Locke occupied a central communicative and stimulative role in this remarkable group. There is ample evidence that he was a close friend and confidant of Newton, the physicist, of Boyle, the chemist, and of Sydenham, the physician, and that he often sought advice from the latter in relation to problems encountered in his practice. During the earlier part of his 15 years

at Oxford, Locke taught grammar and philosophy, along with his study of medicine, but later devoted himself wholly to medicine and especially to pharmacology. Throughout his career, whether at home or abroad he kept ample notes of his observations and those of others, writing now in Latin, again in English, or in his own very efficient shorthand. His notes include many curious empiric remedies and prescriptions, either of his own device or acquired during his extensive travels in France and the later period of his exile in Holland. Though a strong empiricist and iatrochemist, he clearly predicted the modern approach, the use of specific remedies for each disease. In 1678 he wrote: "All doctors up to the present century seem to me to have failed because in the cure of disease, they have given little thought, or none at all, to the specific nature or peculiar ferment or fault (whatever in fact that is) of each disease, and considered solely the bile or phlegm . . . which are no more concerned with their specific natures than the type and richness of the soil is to the species of plants which may grow in it. Yet I have no doubt that to cure each type of disease, either a fixed method or fixed remedies are needed." Here Locke clearly contrasts the humoral pathology and empiricism which then held sway with the modern rationale of therapeutics. It is difficult to believe when reading his detailed prescriptions that he did not write them with tongue in cheek fully realizing how far removed they were from anything specific in terms of modern chemotherapy. At that time about the only remedies of any proven specificity were laudanum or tincture of opium for pain, the Peruvian bark or quinine for fevers, which we would now recognize as malarial and mercury for the pox, or syphilis.

An example of Locke's iatrochemistry, a prescription for gangrene: "Take strong vinegar 10 pints, good spirits of wine 4 pints, Slake in lime 2½ pints with *arsenic* 2 oz. in powder. *Stomach* also, in powder, 3 drachms. Stir all together for the space of three hours then let it settle for 4 or 5 hours, then pour off the clear supernatant fluid and add to it corrosive sublimate 1½ oz. and spirits of wine 1 pint, which being done store well and then bottle and shake it often during 3 or 4 years. It becomes of a deep amber color, and the older the better, for gangrene." According to this, to leave this poisonous concoction in the bottle permanently would be best and perhaps Locke recognized the double meaning of his directions.

Shortly after Locke left Oxford and went to London, he became associated in chemical experiments with Lord Ashley, also a member of the Royal Society. Quite soon Ashley had need of Locke as a physician. He suffered from recurrent abdominal pain, jaundice and a tender mass in the liver. This was "cauterized," after which there was copious drainage of "purulent matter containing many bags and skins." Two and a half centuries later Sir William Osler first pointed out that Locke's observations in this case actually constituted the first definitive description of hydatid or echinococcus cyst, a parasitic disease, which as you know is no longer endemic in England or the United States, but is still common in certain other parts of the world. It is remarkable that Locke achieved a cure in the case of Lord Ashley, thus preserving him for later service as Earl of Shaftesbury and Prime Minister of England. To effect this cure, Locke used a silver tube for long-term drainage and lavage. When Shaftesbury was later forced to flee England that he might escape the tyranny of James II, Locke was also obliged to go into exile in Holland. His medical and philosophical notes of this period are of great interest.

Locke and Medical Humanism

The first draft of Locke's great *Essay on Human Understanding* appeared in 1671. It is believed that this was stimulated by discussions, during the two preceding years, of a small group which met in Locke's rooms to talk about medical, philosophical and theological topics. More than half of the members were doctors, including Thomas Sydenham. Thus we may assume that the club and its discussions were truly representative of medical humanism. The final draft of the *Essay* was not to appear until 1690, after Locke's exile in Holland during which he devoted a great deal of time to the completion of this great work. After the revolution and the accession of William and Mary, Locke returned to England and for the remainder of his life devoted himself at various times to further writing on medical chemistry, philosophy and education. He died in 1704, probably as a result of right heart failure secondary to chronic bronchitis and emphysema. (Even in those days the problem of atmospheric pollution was recognized, and Locke, in fact, believed that the smog of London was a significant factor in the production of his asthmatic bronchitis.)

Locke was very modest about his contributions

to philosophy, speaking of himself "as an underlabourer in clearing the ground a little and removing some of the rubbish that lies in the way to knowledge." During the period that he lived in England, Voltaire, the great French philosopher, historian and satirist, knew Locke and admired him greatly. He spoke of Locke as a philosopher in the following words: "After so many speculative gentlemen had formed this romance of the soul, one truly wise man appeared who has in the most modest way imaginable, given us its real history. Mr. Locke has laid open to men the anatomy of his own soul just as some learned anatomist would have done that of the body."

I have given you this sketch of Linacre and Locke in the belief that their medical humanism must have had a great impact on the later Gold Headed Canesmen, just as it did on still later physicians and humanists, such as Oliver Wendell Holmes, Weir Mitchell, Sir William Osler and, much more recently, our dear departed friends, Bill Kerr and Jim Waring. As yet I have made no attempt to define medical humanism nor touch upon its significance for the practicing physician. Bronowski and Mazlish point out that the humanism of the Renaissance displayed a characteristic coupling of ideas and that this in particular gave it nobility: that classical literature is not an end in itself but expresses a wider love for man and nature. The physician who seeks for himself a broad humanistic culture over and beyond the science and art which he requires to minister to his patients is likely to become a medical humanist to the degree that he persists in seeking. Is it not evident that a doctor who is also a medical humanist will be more effective as a family friend and counselor, and will he not gain more lasting satisfaction in dealing with the problems of human relations which so often present? Humanism enlarges compassion and thus commands greater respect. We can only agree with Osler that the regular reading of great literature enriches the physician's life and broadens his understanding. The more scientific, less humanistic medicine becomes, the sooner it will be a trade rather than a noble profession. As Macauley said in speaking of the factors leading to the downfall of glorious Athens: "Each pursuit became first an art and then a trade. In proportion as the professors of each become more expert in their particular craft, they become less respectable in their general character. Their skill had been obtained at too great expense to be employed only from disinterested views."

Medical Humanism Today

In recent times there has been a remarkable protest in the public press against what has been called the "sickly image" of the doctor in the mind's eye of the people. No matter how exaggerated this may seem to us, or how unwilling we might be to accept it, the medical profession and those responsible for medical education ought to examine the protest with care. I believe that with today's pressures to shorten the University medical curriculum and at the same time include the rapidly increasing body of technical information, the opportunity for the young man or woman entering medicine to gain a broad humanistic education is steadily being eroded. This applies to both premedical and medical curriculum. The latter includes essentially nothing in the way of continued formal offerings in the humanities. During the past five years an experiment has been in progress at Minnesota, consisting of monthly lectures given in the medical school, primarily for the medical students, by selected members of the Minnesota faculty in the humanities, or by visitors. Last year, for example, the mathematician-philosopher-historian, A. Bronowski, whose book I have already referred to, contributed a superb lecture, greatly enjoyed by the students. According to the plan of this program, a student should be able to hear 36 discussions by qualified lecturers, of various aspects of the humanities, during the four years of his medical curriculum.

But just as important, in my mind, is to halt the inroad on the humanities that is being made in the pre-medical curriculum. I have become increasingly convinced that a liberal, humanistic premedical education is essential if the physician is to mean as much to the people and to himself as we would all hope.

Osler, as many of you know, recommended a bedtime half-hour to strengthen the physician's cultural and humanistic attributes. It is safe to say that this habit regularly pursued will reduce the narrowness of an otherwise purely scientific culture. Osler's list of ten great books for the physician's bedtime half-hour includes "The Meditations of Marcus Aurelius," philosopher and Roman Emperor in the "Golden Age of the Empire" or the "Age of the Antonines" of which he was the second. No one can doubt that Marcus was a great

humanist, although this designation was still more than a millenium ahead. He had much to say about the soul, and his thoughts make clear that he would have equated humanism with a greater soul. For example: "Such as are thy habitual thoughts, such also will be the character of thy mind; for the soul is dyed by the thoughts. Dye it then with a continuous series of such thoughts as these: that where a man can live, there he can also live well. Things themselves touch not the soul, not in the least degree." And, from Epictetus, one of Marcus Aurelius' (as well as Osler's) favorite authors: "Be not a little soul bearing about a corpse."

Marcus Aurelius undoubtedly was asking what a man wanted to be like inwardly. He equated greatness of soul with the character of his father, Antoninus Pius. Those of you who have read Osler's magnificent essay, *Aequanimitas,* will remember that for him Antoninus epitomized the subject. Every physician ought to read and know Marcus Aurelius' fine description of the character of Antoninus. This could well serve in complementary fashion to the Hippocratic Oath or the Declaration of Geneva.

Let me close my talk with some of these lines. "Do everything as a disciple of Antoninus. Remember his constancy in every act which was conformable to reason, and his evenness in all things, the serenity of his countenance and his sweetness, his disregard of empty fame and his efforts to understand things, how he would never let anything pass without having first most carefully examined it and clearly understood it; and how he bore with those who blamed him unjustly without blaming them in return; how he did nothing in a hurry; and how he listened not to calumnies and how exact an examiner of manners and actions he was; and not given to reproach people, nor timid, nor suspicious . . .; and with how little he was satisfied, such as lodging, bed, dress, food, servants; . . . and how laborious and patient, and his firmness and uniformity in his friendships, and how he tolerated freedom of speech in those who opposed his opinions; and the pleasure that he had when any man showed him anything better. Imitate all this that thou mayest have as good a conscience when thy last hour comes, as he had." Little wonder that Antoninus had a sense of equanimity as he came to pass what he called the "flaming ramparts of the world."

And now let me add my warm congratulations to three who are to be signally honored here tonight in the Gold Headed Cane Ceremony to all of the members of this class of 1967 on your becoming doctors of medicine to your wives or husbands, your parents and teachers, all of whom have had such great interest in your progress these past four years. My best wishes to you and my hope that you will all be medical humanists as well as medical scientists.